

Work Order ID **74717-2** *split* *A SP*

Wednesday, October 05, 2011 12:58:55 PM

Page 1

Item ID: D2010-104

Accept

Setup Start

Revision ID:

Item Name: Mirror Arm 369/500

Stop

Start Date: 10/5/2011 Start Qty: ~~10.00~~ *4*

Cust Item ID:

Required Date: 10/14/2011 Req'd Qty: 10.00

Customer:

Reference:

Approvals: Process Plan: *M.L.J.* Date: *11/10/05* Tooling:

Run Start

QC: Date: SPC (Y/N):

Stop

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

Draw Nbr	Revision Nbr
D2010	Rev D

100 0.00



NC BRAKE

Brake NC

Memo

0.00

Brake NC

Punch per Dwg. D2010-104 and Spec Control Dwg D2727  
Identify as D2010-104

*SB 11/6/06*

*9*

110 0.00



Small Fab

Small Fab

Memo

0.00

Small Fab

1- Bend as per Dwg D2010 using bending Jig D2010-104T2  
2- Deburr ends

*SB 11/10/04*

*9*

120 0.00



Small Fab

Small Fab

Memo

0.00

Small Fab

1- flare before installing plug as per dwg D2010  
2- Install D2057 plug as per Dwg D2010

*SB*

*6*

*FF 12-02-02*

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

# Work Order ID 74717

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Item ID: D2010-104

Accept



Setup Start



Revision ID:

Stop



Item Name: Mirror Arm 369/500

Start Date: 10/5/2011 Start Qty: 10.00



Cust Item ID:

Required Date: 10/14/2011 Req'd Qty: 10.00



Customer:

Reference:

Run Start



Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

Stop



QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Sequence ID/  
Work Center ID

Operation  
Description

Set Up/  
Run Hours

Tool ID

Tool #

Plan  
Code

Accept  
Qty

Reject  
Qty

Reject  
Number

Insp.  
Stamp

130

QC5- Inspect part completeness to step on W/O

0.00



QC

Memo

0.00

Quality Control

140

Black Sandtex(Ref:4.3.5.7) per QSI005 4.3

0.00



Powdercoat

Powder Coating

Memo

START TIME:

OVEN TEMPERATURE:

FINISH TIME:

0.00

150

QC3- Inspect Part Finish

0.00



QC

Memo

0.00

Quality Control

W 115128

9:30  
320°F  
10:00

6X M/L 12/2/13

6 hr 12-2-3.

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

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**NOTE:** Date & initial all entries



# Work Order ID 74717

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Item ID: D2010-104

Accept



Setup Start



Revision ID:

Stop



Item Name: Mirror Arm 369/500

Start Date: 10/5/2011 Start Qty: 10.00



Cust Item ID:

Required Date: 10/14/2011 Req'd Qty: 10.00



Customer:

Reference:

Run Start



Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

Stop



QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Sequence ID/  
Work Center ID

Operation  
Description

Set Up/  
Run Hours

Tool ID

Tool #

Plan  
Code

Accept  
Qty

Reject  
Qty

Reject  
Number

Insp.  
Stamp

160

Identify as per dwg & Stock Location: ST220

0.00



Packaging

Memo

0.00

Packaging

10/12/11 (6)

170

QC21 - Final Inspection - Work Order Release

0.00



QC

Memo

0.00

Quality Control

M.L.J 12/02/06 (6)

12-02-11 (6)

W/O:		WORK ORDER CHANGES					
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Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
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**NOTE:** Date & initial all entries

# Picklist Print

Wednesday, October 05, 2011 12:58:59 PM

Page 1

Work Order ID: 74717

Parent Item: D2010-104

Parent Item Name: Mirror Arm 369/500



Start Date: 10/5/2011

Required Date: 10/14/2011

Start Qty: 10.00

Required Qty: 10.00

## Comments:

IPP ☐ A ☐ 04.02.17 ☐ New issue ☐ KJ/JLM ☐  
 IPP Rev:B 08-05-27 as per ECN1195P DD verified by:EC  
 IPP Rev:C 08-06-20 rev.D as per dwg DD verified by:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M304TR0.500W.049 		Purchased		No		100	f	394.5211	1.5	15.78947			
304 RD Tube .500 x .049W												FF 12-02-02	

Location	Loc Qty	Loc Code
MAT017	394.521058	
111814	2.23	
115010	145.421058	
117598	66.87	
119087	180	

D2057 		Manufactured	No			110	Each	27.0000	1	10			
Plug												FF 12-02-02	

Location	Loc Qty	Loc Code
GA	20	
71888	20	
ST006	7	
71103	7	

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

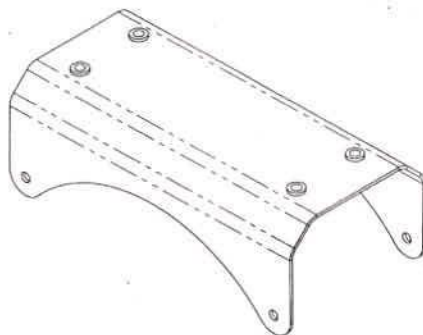
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Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

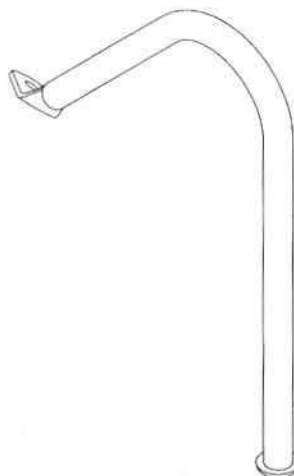
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**NOTE:** Date & initial all entries

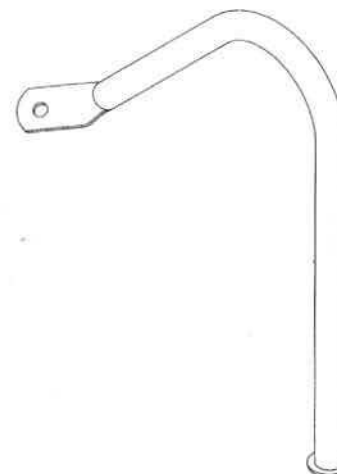




**D2010-101 MIRROR BRACKET**



**D2010-103 ARM**



**D2010-104 ARM**

SHOP COPY  
RETURN TO  
ENGINEERING  
UNCONTROLLED COPY  
SUBJECT TO AMENDMENT  
WITHOUT NOTICE  
WORK ORDER  
NO. ~~74717~~ 74717

M.L.J

11/10/05

RELEASED

D	REDRAWN IN SOLIDWORKS. ADD D2010-1F FLAT PATTERN FOR D2010-101 (ZN B7-2); Ø 0.500 X 0.049 WALL WAS Ø 0.500 X 0.035 WALL (ZN B1-3, B1-4); REASON: TUBING CRACKING DURING SERVICE.	PH	08.06.10
C	1.93 WAS 2.00; 0.50 WAS 0.62	KE	97.10.31
B	7.90 WAS 10.90	JB	92.03.17
A	NEW ISSUE	JB	90.12.15
REV.	DESCRIPTION	BY	DATE
DESIGN	JB	<b>DART AEROSPACE LTD</b> HAWKESBURY, ONTARIO, CANADA DRAWING NO. REV. D D2010 SHEET 1 OF 4 TITLE SCALE MIRROR BRACKET NTS <small>COPYRIGHT © 1990 BY DART AEROSPACE LTD  THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.</small>	
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APPROVED	JB		
DE APPR.	JB		
DATE	08.06.10		

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

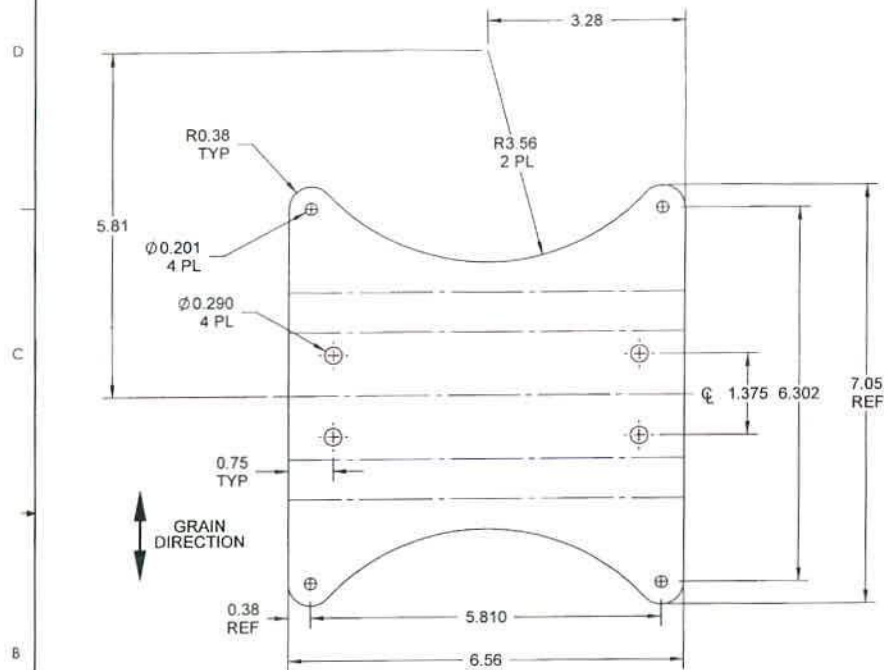
Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

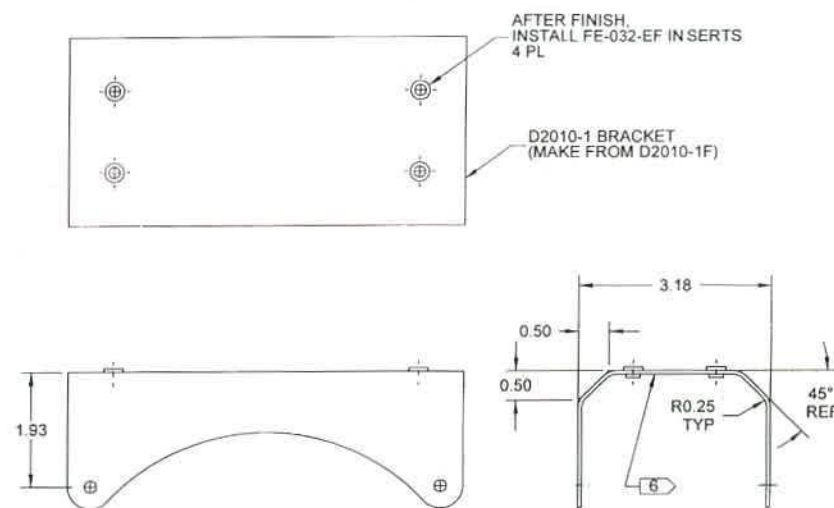
**NOTE:** Date & initial all entries

74717

QTY -101	P/N	DESCRIPTION
X	D2010-101	MIRROR BRACKET
1	D2010-1	BRACKET
4	FE-032-EF	INSERT



**D2010-1F FLAT PATTERN**



**D2010-101 MIRROR BRACKET**

**RELEASED**  
28-06-19/11

**NOTES:**

- 1) MATERIAL: D2010-1F: 2024-T3 ALUMINUM SHEET, 0.063 THICK PER AMS-QQ-A-250/4 OR AMS 4037 (REF DART SPEC M2024T3S 063)
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1 POWDER COAT BLACK SANTEX (4.3 5.7) PER DART QSI 005 4.3
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY WITH DART P/N "D2010-101" USING WHITE FINE POINT PERMANENT INK MARKER OR LABEL
- 7) WEIGHT: 0.23 lbs

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MFG. APPR.		D2010	SHEET 2 OF 4
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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

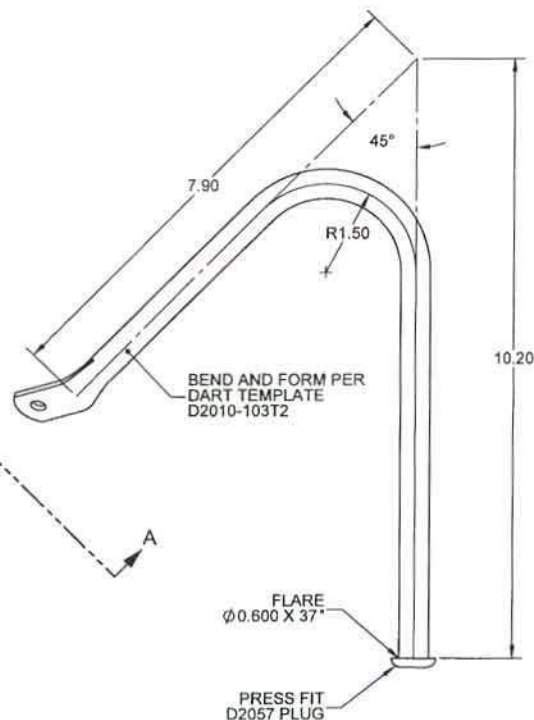
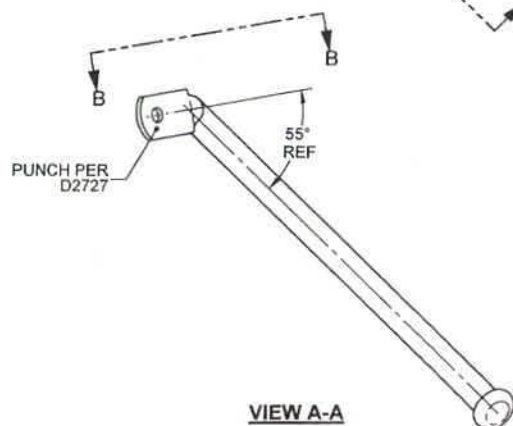
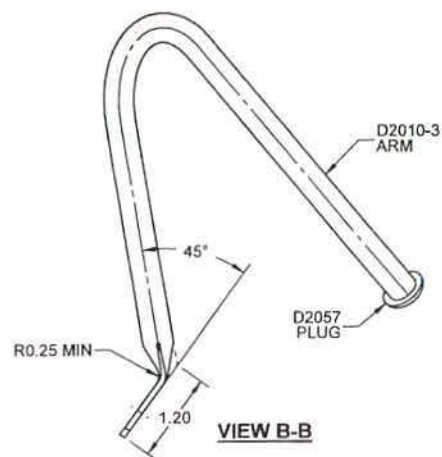
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NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries



74717



QTY -103	P/N	DESCRIPTION
X	D2010-103	ARM
1	D2010-3	ARM
1	D2057	PLUG

RELEASED

- NOTES:
- 1) MATERIAL: D2010-3: AISI 304/316 SS SEAMLESS ROUND TUBING,  $\phi 0.500 \times 0.049$  WALL (REF DART SPEC M304TR0.500W.049)  $\triangle$
  - 2) FINISH: POWDER COAT BLACK SANDTEX (4.3.5.7) PER DART QSI 005 4.3
  - 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
  - 4) UNITS: INCHES UNLESS OTHERWISE NOTED
  - 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
  - 6) IDENTIFICATION: IDENTIFY WITH DART P/N "D2010-103" USING WHITE FINE POINT PERMANENT INK MARKER
  - 7) WEIGHT: 0.34 lbs

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CHECKED	PH	DRAWING NO. D2010	REV. D
MFG. APPR.	PH	TITLE MIRROR BRACKET	SHEET 3 OF 4
APPROVED	PH	SCALE	NTS
DE APPR.	PH	COPYRIGHT © 1990 BY DART AEROSPACE LTD	
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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

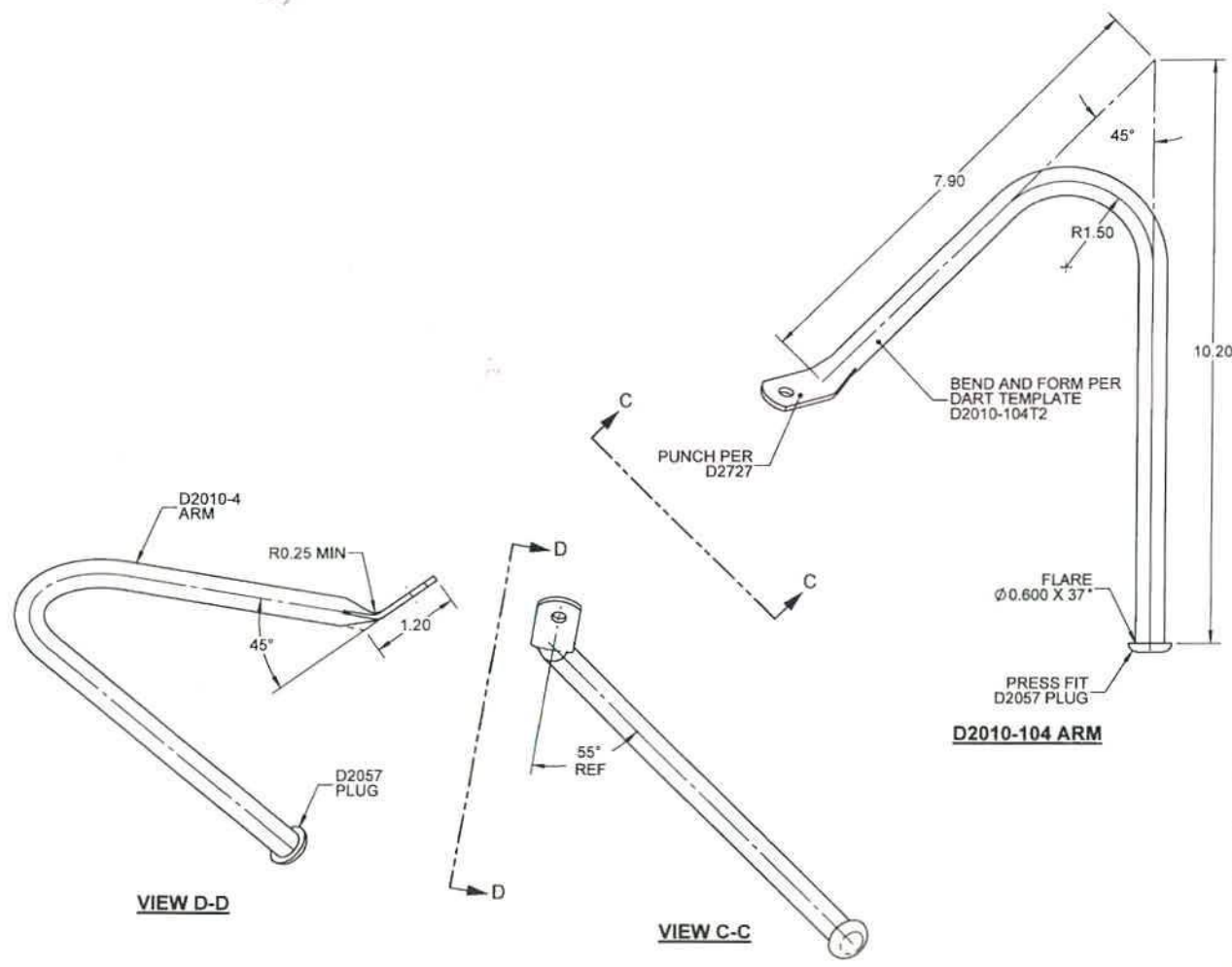
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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
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**NOTE:** Date & initial all entries

74717

QTY -104	P/N	DESCRIPTION
X	D2010-104	ARM
1	D2010-4	ARM
1	D2057	PLUG



**D2010-104 ARM**

**RELEASED**  
08-06-10

- NOTES:**
- 1) MATERIAL: D2010-4; AISI 304/316 SS SEAMLESS ROUND TUBING, Ø0.500 X 0.049 WALL (REF DART SPEC M304TR0.500W.049)
  - 2) FINISH: POWDER COAT BLACK SANDTEX (4.3.5.7) PER DART QSI 005 4.3
  - 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
  - 4) UNITS: INCHES UNLESS OTHERWISE NOTED
  - 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
  - 6) IDENTIFICATION: IDENTIFY WITH DART P/N "D2010-104" USING WHITE FINE POINT PERMANENT INK MARKER
  - 7) WEIGHT: 0.34 lbs

DESIGN	JB	<b>DART AEROSPACE LTD</b>	
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CHECKED		DRAWING NO.	REV. D
MFG. APPR.		D2010	SHEET 4 OF 4
APPROVED		TITLE	SCALE
DE APPR.		MIRROR BRACKET	NTS
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